

Sanjana Jain

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SUMMARY

My goal is to model voluntary human movement and design interactive systems with **computer vision and machine learning**. I spent 3+ years as a software analyst maintaining large-scale enterprise systems at Deloitte. I am a National hackathon winner, specializing in game development, augmented reality and virtual reality.

EDUCATION

- **Jaypee Institute of Information Technology** Noida, India
B.Tech in Computer Science Aug 2017 – May 2021
 - **GPA.** 7.2/10 (cumulative), 8.45/10 (senior year).
 - **Relevant Coursework.** Machine Learning & Natural Language Processing, Matrix Computations, Operations Research, Computer Graphics, Image Processing and Analysis, Algorithms & Problem Solving, Data Structures, Operating Systems and Systems Programming, Database Systems & Web, Computer Networks.
 - **Scholarship.** Awarded a scholarship and recognition certificate by the university for a national hackathon win.

RESEARCH PROJECTS

- **Gait Analysis for Parkinson's Disease** Senior Year Project CV/ML
Prof. Suma Dawn 2021
 - **Computer vision on walking videos** for inexpensive and effective **early-stage diagnosis** of Parkinson's Disease.
 - Used background extraction, noise filtering, and morphological transformation to achieve skeletonization.
 - Achieved motion-cue extraction using cosine similarity in order to analyze **patterns in joint movements**.
- **EduAR – Interactive AR Learning Platform** Junior Year Project AR/VR
Prof. Suma Dawn 2020
 - An **interactive AR learning** application that visualizes science concepts using **3D simulations** and **animations**.
 - Integrated a **chatbot** and **Slack interface** to facilitate quizzes and real-time Q&A environment in remote settings.

HACKATHONS & AWARDS

- **1st Prize National Winner, Smart India Hackathon** AR/VR
Future Generali Mixed Reality Application: [Certificate] Mar 2019
 - Built a **Mixed Reality insurance support** tool to streamline customer onboarding and explain claim processes.
 - Selected as the national winner for innovation, technical execution, and real-world applicability.
- **Finalist, Build for Digital India Hackathon, Google** AR/VR
RetailAR: Retail Augment Reality: [Demo] Feb 2020
 - Developed a single-point end-to-end AR-based interface to **improve shopping experience** for retail customers.
 - Integrated navigation of stores via **geofencing**, product information via QR, and **ML recommendations**.
- **Scholarship, Spark AR Open Program, Facebook** AR/VR
School of Innovation India from Facebook: [Certificate] Mar - Jun 2020
 - Among **top 250** teams out of 10,000 students to receive scholarship and certification to Spark AR flagship program.
 - Fully-funded intensive training on Spark AR, **3D modeling**, **Visual Scripting** and Reactive Programming.
- **South Asia Winner, OpenCV AI Competition** CV/ML
Gait Analysis for Parkinson's Disease: [University Recognition] Mar - Aug 2021
 - **Phase 1 winners** of the South Asia Region and qualified among the **top 150 research** projects worldwide.
 - Support early screening of Parkinson's through **joint motion patterns in walking videos** with computer vision.

SELECTED PROJECTS

- **Lightweight Motion Q&A** Independent Project CV/ML 2025
[Github]
 - A system for **open-ended Q&A** about human motion in **short video clips**, such as questions about dance videos.
 - Designed end-to-end workflow to integrate browser, **gradio web app**, **video pose extractor**, and **LLM Planner**.
- **VirFrame: Interactive COVID Awareness Game** GMTK Game Jam Game Dev 2020
[Demo Video]
 - Designed a 2D platformer where each player is randomly assigned to play as a “good” or “bad” virus character.
 - Developed gameplay rules focused on unpredictability and engagement to **gamify Covid-19 awareness**.
 - Implemented **core gameplay logic**, **UI**, and **game assets** for a time-bounded international game jam.
- **AR/VR COVID-19 Awareness Simulation** Junior Year Project & Dishathon AR/VR 2020
[Demo Video]
 - Created **VR environments** to **model COVID-19 transmission patterns** in common public spaces.
 - Built interactive **AR simulations** to demonstrate how **distancing and mask usage influence** exposure risk.
 - Implemented physics-based simulations and optimized scenes for **real-time mobile-friendly** performance.
- **FurnitureAR: In-Home AR Furniture Visualization** WieHack AR/VR 2020
[Demo Video]
 - AR application enabling users to **virtually place** and **visualize furniture** in their homes before purchase.
 - Handled object placement, scaling, and simple lighting to maintain **realistic appearance** in varied environments.

WORK EXPERIENCE

- **Deloitte USI** Gurgaon, India
Feb 2021 - Apr 2024
Identity and Access Management, Cybersecurity
 - End-to-end access provisioning for large-scale enterprise applications across both Windows and Linux environments.
 - Resolved server authentication failures caused by Centrify package issues, cache problems, and configuration errors.
 - Recognized with multiple Spot awards and an Applause award for reliable execution in critical access operations.
- **Internship: Elixir Systems** Delhi, India
Apr 2020 - Jun 2020
AR Developer Intern: [AR Curriculum Example]
 - Designed and developed interactive **augmented reality simulations** to aid with middle-school curriculum.
 - Mapped textbook images to **interactive 3D models** in Android application using image-based marker recognition.

TECHNICAL SKILLS

- **Programming:** Python, C++, JavaScript, C#.
- **Tools/Engines:** Unity3D, Android Studio, Blender, Adobe Photoshop, IBM Watson.
- **Frameworks/Platforms:** ARCore, Vuforia, TensorFlow, OpenCV, Git, Linux.
- **Interests:** Game Development, AR/VR, Computer Vision, Machine Learning.

LEADERSHIP & EXTRACURRICULARS

- **Game Dev and Graphics Society** Jaypee Institute of Information Technology Game Dev 2019 – 2020
Coordinator
 - Organized **Unity game jams** and delivered **hands-on workshops on 2D and 3D game development**.
 - Led **Photoshop workshops** and **mentored** juniors in foundational game art and asset creation.
- **Dance Certifications and Workshops**
Kathak, Contemporary, Hip-Hop
 - Formally trained across **multiple dance styles**, including completion of an 8-year diploma in Kathak.
 - Led **online and offline workshops** and performed at cultural events and competitions.